

Amendments to the Claims

Please note that "strikeout" matter is shown with larger-than-normal italic letters containing the strikeout horizontal marks such as in this example: *~~strikeout~~*.

Claim 1. (Cancelled)  
Claim 2. (Cancelled)  
Claim 3. (Cancelled)  
Claim 4. (Cancelled)  
Claim 5. (Cancelled)  
Claim 6. (Cancelled)  
Claim 7. (Cancelled)  
Claim 8. (Cancelled)  
Claim 9. (Cancelled)  
Claim 10. (Cancelled)  
Claim 11. (Cancelled)  
Claim 12. (Cancelled)  
Claim 13. (Cancelled)  
Claim 14. (Cancelled)  
Claim 15. (Cancelled)  
Claim 16. (Cancelled)  
Claim 17. (Cancelled)  
Claim 18. (Cancelled)  
Claim 19. (Cancelled)  
Claim 20. (Cancelled)  
Claim 21. (Cancelled)  
Claim 22. (Cancelled)  
Claim 23. (Cancelled)  
Claim 24. (Cancelled)

Claim 25. (Currently amended) A non-hollow needle electrode for penetration into tissues which includes ~~a~~ an outside coating having at least one static layer of releasable macromolecules to be delivered into biological cells, in the tissues penetrated by the electrode, by an applied electric field applied to the biological cells in the tissues penetrated by the electrode.

Claim 26. (Original) A plurality of electrodes of Claim 25 which form an electrode assembly.

Claim 27. (Cancelled)

Claim 28. (Previously amended) The electrode assembly of claim 26 wherein said plurality of electrodes are arranged in at least two parallel rows of electrodes.

Claim 29. (Previously amended) The electrode of Claim 25 wherein said macromolecules in said static layer are in a solid phase.

Claim 30. (Cancelled)

Claim 31. (Previously amended) The electrode of Claim 25 wherein said electrode includes a fixed electrode surface which is coated with said static layer of releasable macromolecules.

Claim 32. (Cancelled)

Claim 33. (Cancelled)

Claim 34. (Cancelled)

Claim 35. (Cancelled)

Claim 36. (Cancelled)

Claim 37. (Cancelled)

claim 38. (Previously amended) The electrode of claim 25 wherein said macromolecules in said static layer include a polynucleotide vaccine.

claim 39. (Cancelled)

claim 40. (Previously amended) The electrode of claim 25 wherein said macromolecules in said static layer include a DNA vaccine.

claim 41. (Cancelled)

claim 42. (Cancelled)

claim 43. (Cancelled)

claim 44. (Previously amended) The electrode of claim 25 wherein said macromolecules in said static layer include a protein-based vaccine.

claim 45. (Cancelled)

claim 46. (Cancelled)

claim 47. (Previously amended) The electrode of Claim 25 wherein said macromolecules in said static layer include an organ treating agent and wherein said organ treating agent includes a deep tissue tumor treating agent.

Claim 48. (Cancelled)

Claim 49. (Currently amended) The electrode of Claim 25, wherein said coating of said electrode with said static layer of macromolecules to be delivered to the biological cells is applied to said electrode by carrying out ~~carried-out-by~~ the following steps:

preparing a liquid medium in which a quantity of said macromolecules are carried,

contacting said electrode with the prepared medium, and

removing said electrode from the medium and drying off the medium, such that a static coating of said macromolecules remains on said electrode.

Claim 50. (Currently amended) The electrode of Claim 25 wherein said coating of said electrode with said static layer of macromolecules to be delivered to the biological cells is applied to said electrode by carrying out ~~carried-out-by~~ the following steps:

preparing a liquid medium in which a quantity of said macromolecules are carried,

contacting said electrode with the prepared medium,

applying pulse waveforms to said electrode, such that a portion of said macromolecules are bound to said electrode, and

removing said electrode from the medium and drying off the medium, such that a coating of said macromolecules remains on said electrode.

Claim 51. (Cancelled)

Claim 52. (Currently amended) A non-hollow needle electrode for penetration into tissues which includes ~~a~~ an outside coating having at least one static layer of solvent releasable macromolecules to be delivered into biological cells, in the tissues penetrated by the electrode, by an applied electric field applied to the biological cells in the tissues penetrated by the electrode.

Claim 53 (Currently amended) A non-hollow needle electrode for penetration into tissues which includes ~~a~~ an outside coating having at least one static layer of releasable macromolecules to be delivered into biological cells, in the tissues penetrated by the electrode, by an applied electric field applied to the biological cells in the tissues penetrated by the electrode, wherein said macromolecules are selected from the group consisting of polynucleotides and proteins.